INFORMATION REPORT INFORMATION REPORT

CENTRAL INTELLIGENCE AGENCY

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	4	S-E-C-R-E-T	25 X 1
	Hungary	REPORT	
SUBJECT	Military Bridging Equipment	DATE DISTR. NO. PAGES 1	25X1
DATE OF		references RD	
DATE OF INFO. PLACE & DATE ACG			25X1
		NITIVE. APPRAISAL OF CONTENT IS TENTATIVE	25X1
1.	report describing bridging mater in 1956 and earlier.	erial, apparently used by Hungarian troops	25X1

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The 51 model NoP Combet Bridge Material

Introduction:

Standard bridge material of Soviet engineers received by Hungarian feople's Army in fall of 1954. Used in 1954/55 training year. There are three models in the Soviet Army: NLP (1938 model); N¹P (1946 model); and N²P (1951 model). The first two models are rarely used now by the Soviet engineer units. They were discarded because of low weight capacity and obsolescence. The Hungarian Feople's Army received one content bridge column from the Soviet Union in the fall of 1954. The Hungarian munitions factories (in Sztalinvaros and in Dioseyor) now manufacture them. The materiel officers get them from the central warehouse in Budafali-Haros [?]. they are delivered by train. Every independent engineers battalion received a 1/3 supply of N²P bridge material. A supplementary 1/3 supply of brand new N²P bridge material was to have been issued in the fall of 1956 but an embargo was put on and they could be used only with special order of the Minister of Defense. Due to the lack of material the troops were able to make ferries only.

 $\mathtt{I}_{\,\bullet}$

Use of material

Engineer troops used them to: build bridges, and to build river crossing ferries.

Load capacity of bridges: 8-ton, 12-ton, 16-ton, and 30-ton bridges.

Load capacity of ferries: 16-ton, 30-ton, and 60-ton crossing ferries.

A division could build one bridge and two pair of crossing ferries.

A corps could build two bridges and four pair of conssing ferries.

The pontoons could be used for infantry crossings with oars or shunted by assault boats. Capacity of the pontoons is: bow section 16-18 men with equipment; middle section 12 men with equipment; stern section 14-16 men with equipment.

Two pontoons could be fastened together to transport anti-tank or anti-aircraft guns.

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III.

Detailed description of equipment.

Designation: 51 M - N²P heavy bridge material.

Material: Riveted iron sheet.

Parts: Pontoon (bow section, middle section, stern section); longitudinal girder; half longitudinal girder; cross iron; plank; border holder; rail iron; spikes; bolts; bucks [ie., wharf pieces], 2 each; buck mitre; shoes [or rockers], 2 each; girder iron 1; half planks; three quarter planks; fastening link; anchor; anchor rope; girder timber; pontoon clamp (link); short rope; bank timber.

Made of multiple iron riveted sheets.

Pontoon.

Made of iron sheet, welded at joints, riveted at ribs. Ribs are $oldsymbol{\sqcup}$ shaped iron. There are holes in the side for fastening the longitudinal girders with bolts. These are numbered according to the manifold construction system. The red line on the side shows the dangerous load level.

There is a mark on the side of every pontoon, (12) or some sort of animal (pigeon, duck, etc.), the color of the pontoon is dark green.

Carrying requires 8 men per side. "hen transported more than 150 meters a special Csepel K-300 truck is used.

Internal equipment: 8 sweeps; 8 row locks; 1 life belt; 1 grapnel [or boat hook]; 1 anchor; 1 anchor rope; 1 short rope; 3 foot gratings; 1 bailer.

Longitudinal girder. (5+ % 36 %)

Made of hard wood, weight: [written over in original, probably 24 or 36 kg.]. Use: placed directly on the pontoons and fastened with spikes, the planks are laid on these.

There is a hole in each end, 10 cm from the end and 2 cm in diameter, used when fostening with spikes.

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Two pen carry one girder. There is a 5-cm red stripe on each end of the girder.

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	Cross iron	
Made of L shaped iron.	Used to fasten longitudinal girders to pontoon.	
Each cross iron has 12	noles of about 3 cm diameter through which bolts	
fasten them to the pont	oons.	
		25X
Carried by 1 person		
	Half longitudinal girder.	
Made of wood. Use: plac-	ed between two ferries and fastened with spikes at	
both ends to make a com	ined ferry.	OFY
		25 X
Disconnection is simple	, pick up the plank above the holts, pull out the	
spikes, and the two ferm		
	<u>Plank</u> .	
		25X
Tickness: 6 cm.		
Use: placed over longitu	idinal girders one beside the other. Forms the surface	
layer for the traf:	fic.	
Carried by one person;	it weighs 45 kg.	
	Half plank.	
Length is the same but	width is only 20 cm because there are places where only	
half planks will fit bed	cause the two cross irons also take up space on the	
longitudinal girder.		
Fringing the ferry up to	the wharf requires use of the L shaped pipes and	
here also only half long	gitudinal girders [sic., probably means half planks]	

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can be used.

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au	25 X 1
Cross iron.	
	25 X 1
raterial: iron, with holes through which bolts fasten it to the longitudinal	
girders. Hooked bolts go through the holes into the side of the pontoon.	
	25 X 1
The bolts are pulled down tight with a key wrench].	
	25 X 1
It is made of aluminum	
	25 X 1
Hand rail.	
	25 X 1
,	
Material: iron pipe. The rope goes into litile rings. Used on bridge or	
ferry to keep people from falling into the water. The rail irons are fixed	
into holes made for this purpose in the border girder. Three ropes or	
safety lamps are placed on the rails.	
<u>Spike.</u>	
:	25 X 1
hade of aluminum. Used for fastening.	
<u>Buck.</u> (Wharf)	5 X 1
The buck is made of iron and consists of a girder beam, sliding beam, and	

The buck is made of iron and consists of a girder beam, sliding beam, and shoe [or rocker]. Used in making wharfs in water up to 110 cm deep. If the water is deeper a floating member is used.

It is put together on the bank and then 12 persons carry it into place. It is very difficult to set up.

It can be used only if the soil is hard. Other wise it sinks in and slips. It is staked to the bank strongly to prevent slipping under load. 25x30 [cm] beams are placed under it to prevent sinking. The first field [mezo, meaning planked section apparently] is built from here.

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Disadvantages:

Putting it together is difficult and takes a long time; it breaks down during use; it can be built only on solid soil; after a change in water level [?] it must be built up which is very involved and takes longer than starting anew; it is not modern; the shoes [rockers] have a small pressure surface; in general the troops don't have them; a large parcel of earth must be dug out of the bank for the approach.

	25X
lontoon bow section.	25X
Middle section.	25X

III.

Construction methods.

Wharf.

One officer and 18 men [1/18 persons] are needed to build a wharf. 1./
a carrying squad and 2./ a building squad.

The first squad sets up the buck on the bank, determines the depth of the water, and prepares the buck for the necessary depth.

The second squad sets up the bank timber during this time and puts it in place by the triangular method.

	25X1
Stern section.	
	25X1

Then the longitudinal girders are carried in by the first squad and the second squad installs them. Then the second squad does the planking and the first squad puts down the border. The bank timber is placed in line by the triangular method and is centered on the mid-point of the buck.

Sanitized Copy Approved for Release 2010/07/01 : CIA-RDP80T00246A040400600001-6	25 X 1
Eridge line.	
We set up a bridge line so the bridge will be straight.	25 X 1
The buck is staked to the bank to ensure against slipping. Then the members	
(ferries) are put together.	
16-ton Ferry (built into bridge)	
Fersonnel: one officer and 36 men [1/36 persons], \$ 8-man squads.	
Course of work:	
Squads 1 and 2 put together the rontoons along the bank. The lower	
connections are worthy of attention here	25 X 1
The upper connections are for training [and] are actually made for 30-and	
60-ton ferries.	
After assembly, the longitudinal girders, which had been prepared by	
squads 3 and 4, are installed; 1,2, and 3 in the bow section; 4,5,6,7,8, and	
9 in the middle section; and 10, 11, and 12 in the stern section.	
Spikes are placed in every longitudinal girder and the girders are layed	
on the pontoons. Then squad 1 bolts down the cross irons, 3 cross irons	
per field. Squads 3 and 4 begin to carry down the planks and squad 2	
puts them in place.	
After planking, squad 1 places the border timber on the planks and bolts it	
down tight. Squad 2 sets up the rail posts and stretches the ropes. Squad	
3 puts the pontoons in order. Putting out sweeps, rowlocks, anchor and rope,	
and preparing the life belt.	
Pontoon order: Then the first squad checkes all bolts and draws them tight, the 16-ton	25X1

ferry is then built into the wharf.

Completion times (norms):

Wharf, 18-20 minutes; 16-ton ferry, 25-30 minutes; 30-ton ferry, 45 minutes; 60-ton ferry, 50-60 minutes; 30-ton bridge construction, 2-3 hours; 60-ton bridge construction, 4-6 hours.

A 16-ton Bridge Field.	25 X 1
Pridge construction embarkation.	
	25 X 1
Fridge construction embarkation.	
Method of execution:	
First group does reconnaisance. Second group lays bridge line and	25 X 1
anchor lines. Construction of ferry and wharf	
The ferries are hidden with branches and camouflage nets along the bank. material Before construction, the section ["ag."] is hidden and dug in in a starting area	
250 meters from the water.	
	25 X 1

The material is carried forward on a special command.

Construction can be: prepared in advance (far from the enemy) or from the starting positions (near the enemy).

Preparation in advance.

If the bridge is not near the enemy or is not on a main line it is built under conditions of poor visibility and camouflaged on the bank. When the troops are expected to cross, we start to bring the ferries into the bridge line with assault boats or "AVM mocso". Every ferry commander is responsible for fastening his own ferry to the next immediately. One squad [stays?] on the ferry until the other troops leave the bridge. There is always a "T" [reserve] ferry ready and hidden. At the same time, the bridge commander upstream) organizes security sending a reconnaissance and mine exploding group of 6 men and 1 officer about 2.5 kilometers up from the bridge.

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Equipment: 1 "AVM" recon. "mocso"; 1 mine detector; 1 machine gun; 1 assault boat. [Note: the "AVM" is probably a "motor oar," a Russian outboard motor.]

Mission: Fatrol the water against mines thretening the bridge. Spotting hostile patrols. And maintaining contact by radio. A similar group goes down stream.

Construction of bridge from the starting position.

Done if the enemy is on the far shore or if an assault crossing is to be executed. The material is brought to the starting position on the day before the attack. Construction is begun under protection of an artillery barrage. The pontoons are carried quickly to the water and installed. Construction is carried out under cover of a smoke screen.

Material for the 16-ton ferry.

3 bow sections; 3 middle sections; 3 stern sections; 12 longitudinal girders; 36 planks; 3 cross irons; 4 border timbers; 6 railing irons; 3 anchors; 3 anchor ropes; 60 spikes; bolts.

Material for the wharf, 16-ton.

7 longitudinal girders; 22 [or 11] planks; 1 bank timber; 10 stakes; 1 buck; 2 shoes [or rockers]; spikes; bolts; 4 railing irons; ropes.

30 ton bridge (ferry)

Construction is similar to the 16-ton ferry except that the 16-ton ferry has a single lane whereas the 30-ton ferry handles two-way traffic and twice the amount of material is needed. The longitudinal girders are built with interdistances of nearly 20 cm. The planks are bolted down at sides and in the middle with border [curbing] beams. The bolts do not touch the differentials of the vehicles.

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Servicing personnel: 1 officer and 54 men [1/54 persons]
Number of longitudinal girders, 24; number of planks, 72; pontoons 6
bow sections, 6 middle sections, and 6 stern sections.
25X1
Transportation and loading of the N2P.
A specially manufactured Csepel K-300 is used to transport the combat bridge
material. The troops were not equipped with these trucks, only the two
engineer bridging Brigades had them.
The troops transported the bridges on Gsepel 350's which was very
difficult to load.
Loading of the Csepel 350: 1 truck carries 1 pontoon with ropes;
l truck carries 24 longitudinal girders; l truck carries 72 planks; l
truck carries 1 buck wharf.
With the exception of the pontoons the materials were loaded on stake trucks.
Every truck also carried one attack [illegible word].
The K-350 truck was also loaded with longitudinal girders, 7 girders to a
truck and every girder was bound above and below with a strap.
25X1

25X1

